UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
5 POST OFFICE SQUARE, SUITE 100
BOSTON, MA 02109-3912

June 11, 2010

Mr. Jamie Sikora
Environmental Program Manager
Federal Highway Administration
19 Chenell Drive, Suite One
Concord, New Hampshire 03301

Re: Interstate 93 Improvements Salem to Manchester Final Supplemental Environmental Impact Statement and Reevaluation/Section 4(f) Evaluation
(CEQ #20100171)

Dear Mr. Sikora:

The Environmental Protection Agency-New England Region (EPA) has reviewed the New Hampshire Department of Transportation's (NHDOT)/Federal Highway Administration's (FHWA) Final Supplemental Environmental Impact Statement (FSEIS) and Reevaluation/Section 4(f) Evaluation for the Interstate 93 (I-93) Improvements from Salem to Manchester, New Hampshire. We submit the following comments on the FSEIS in accordance with our responsibilities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act.

The FSEIS describes the proposed widening of I-93 from two to four lanes in each direction over a 19.8-mile segment from the Massachusetts/New Hampshire border to the I-93/I-293 interchange in Manchester. The roadway will be constructed as four lanes but only three lanes will be paved until NHDOT can demonstrate that the conditions of New Hampshire's Section 401 Water Quality Certification can be met for four lanes. EPA's previous comments on the project through the NEPA process have consistently recommended that risks to surface and ground waters from road salt be addressed in greater detail. Our comments on the 2009 DSEIS addressed this issue along with alternatives, wetlands, greenhouse gas emissions, air quality and indirect effects.

The attachment to this letter details ongoing concerns we have regarding the substantial increase in the total amount of wetland impacts, the need for a revised wetland mitigation package, indirect and cumulative impacts, conclusions about chloride impacts to water quality, and greenhouse gas emissions. We believe NHDOT/FHWA needs to address these outstanding issues prior to the close of the NEPA process.

Thank you for the opportunity to review the FSEIS. Please contact Timothy Timmermann (617-918-1025) of EPA's Office of Environmental Review with any comments or questions about this letter.

Sincerely,

H. Curtis Spalding
Regional Administrator

Attachment

EPA Comments on the Final Supplemental Environmental Impact Statement and Reevaluation/Section 4(f) Evaluation for the Interstate 93 Improvements Salem to Manchester, New Hampshire

Wetland Impacts

EPA continues to have concerns about the additional wetland impacts identified since the publication of the DSEIS, how to effectively mitigate for those impacts, and how to determine what will qualify as "wetland restoration" in the final mitigation package.

Additional Wetland Impacts

The FEIS stated that this project would directly fill 77 acres of wetlands. The DSEIS and FSEIS state that a more detailed wetland delineation has taken place for approximately 40% of the 19-mile project. Results show that the project will fill 9 more acres of wetland (a 27% increase for this section of highway). The remainder of the delineation will take place during the next 9 – 12 months; therefore, this number will likely increase when the remainder of the more detailed delineation work is complete. Page 10-26 of the FSEIS states (10.6.3): "NHDOT has been and will continue to coordinate with the ACOE, NHDES and other natural resource agencies regarding the increase in the total acreage of wetland impacts. As is typical for projects of this scope, the regulatory agencies understand that wetland impacts will change as the project progresses and have therefore made provisions for updating permits to reflect the actual impacts." We do not agree with this characterization. In the normal course of the review small changes are expected on large projects (less than 5%), but impacts of 27% over what was permitted are not representative of the normal course of the wetland permit review process. Based on our past experience we note that the Corps has stated that impacts over 10% of the originally permitted amount require a discussion with the federal resource agencies and a permit amendment. Miscalculations for the Route 16 project (with the actual impact numbers being much higher than the permitted impact totals) and this project are the largest errors EPA has seen in the last 25 years for DOT projects in New England. We believe that this change in the wetland impact clearly warrants a permit amendment, not simply an "updated permit."

Mitigation

The increased wetland impacts described in the FSEIS require additional mitigation to address these new impacts. Our comments on the DSEIS stated that many of the proposed mitigation parcels that NHDOT will protect are of limited value as they are small and ecologically isolated. We also noted that effective mitigation should be judged on ecological function not just the total amount of wetland acres provided as focusing on numbers can lead to misleading results. We believe that the additional wetland impacts should be mitigated by payments in the In-lieu-fee fund, where experienced state and conservation groups select high quality sites. NHDOT responded in the FSEIS that they will continue to coordinate with EPA and other agencies at the monthly coordination meetings. However, at a recent meeting NHDOT suggested that the existing mitigation plan should be able to cover additional wetland loss that is identified. We do not agree

and believe strongly that NHDOT should work with EPA and the Corps to develop an acceptable mitigation plan prior to the close of the NEPA process for the project.

Wetland Creation

The FSEIS states that NHDOT will create or restore 24 acres of wetlands. Three of the proposed creation/restoration sites, totaling 12 acres, are designated for flood storage use and they are located in isolated parcels next to heavy development. Thus, they are poor sites for wildlife and ecological integrity and are not sustainable long-term as required by the 2008 Mitigation Rule (40 CFR Part 230). These sites may be acceptable for flood storage functions, but like retention basins created for gathering stormwater runoff, it does not seem reasonable to double count them as wetland creation or restoration projects. Areas designed for flood storage should not be included as wetland creation or restoration in the Record of Decision for the project.

Chloride Issues/Water Quality

Response to EPA Comment Number 10 (Appendix A, page F-2)

Our comments on the DSEIS requested that specific monitoring well data be presented to support the DSEIS conclusions that the project would have no chloride impacts to groundwater. The FSEIS includes a summary of the data. We continue to believe that the EIS should have included maps showing well locations, specific conductivities and temperatures recorded, the regression equation used to convert specific conductivity to chloride, well-purging and field meter calibration records, and the approved QAPP for such sampling. Lacking this information, NHDOT's statement of no impact on page 10-6 of the FSEIS, " The sodium and chloride groundwater analysis found that even with the doubling of roadway lane miles under the 2005 Selected Alternative, average sodium and chloride concentrations in groundwater at the edge of the right-of-way were projected to be well below the 250 mg/l secondary drinking water standard for sodium and chloride" has no scientific basis. To reach such a conclusion NHDOT would need to prove by on site data obtained by accepted hydrogeological monitoring techniques that elevated concentrations of sodium and chloride do not exist anywhere within the ROW. To date, it has not and data available for the project corridor area would not support such a conclusion. We believe NHDOT/FHWA has a responsibility to support conclusions of this type with relevant data.

Drinking Water Impacts from Chloride

In addition, we continue to recommend that public water supply wells within 500 feet of the ROW (such as the well serving Boumil Grove Condominiums) should be sampled by NHDOT, and results presented for consideration as part of the impact analysis and mitigation planning effort for the project. For example, as part of limited field investigation activities for NHDOT at 15-19 Keewaydin Drive in Salem, ATC Associates, Inc. collected a groundwater sample on April 15, 2010 from MW-3135 located adjacent to the I-93 southbound lanes in Salem, south of Exit 2 [personal communication, John Kubiczki, June 2, 2010]. On that date at that location specific conductivity was measured at 931 uS/cm. This shallow overburden well is 13 feet deep and penetrates loam and fine to coarse brown sand. The depth to ground water was 4

feet. Using the NHDES regression equation for I-93 (Chloride = 0.307*SC - 22), this conductivity indicates a chloride concentration of approximately 264 mg/l, above the 250 mg/l secondary DW threshold. The conductivity was this high despite record rainfall during the previous month. Based on 2004 EPA sampling of bedrock MW-5D, a short distance away next to I-93 northbound, it is likely that groundwater at depths greater than 13 feet has higher chloride concentrations. These and other wells are available for sampling and we strongly encourage NHDOT to sample them and use the results to validate or negate claims of no impact to the ground water/drinking water resource.

Report Posting to I-93 Website

EPA recommends that NHDOT post the following reports on its Rebuilding I-93 website to provide for a more complete record about water quality issues within the project corridor:

1. "Chloride Surveillance Monitoring Plan, I-93 Widening from Massachusetts to Manchester, NH, Quality Assurance Project Plan, June 5, 2007"

2."Chloride Surveillance Monitoring, I-93 Widening from Massachusetts to Manchester, NH, Northern Section Annual Report - Year 3" by The Smart Associates, Inc., Concord, NH, March 30, 2010

3. "I-93 Improvement Project, Chloride Surveillance Monitoring," by VHB, Inc, Bedford, NH, April 2010

4. "I-93 Expansion BMP Efficiency Trend Monitoring Plan," by NHDOT and NHDES

5. I-93 Expansion BMP Efficiency Trend Monitoring Annual Report - Year 2," by NHDES

Macroinvertebrate Sampling

EPA continues to strongly recommend that baseline studies of macroinvertebrates and fish be conducted in the Tributary to Harris brook, Dinsmore Brook, the Tributary to Wheeler Pond, Beaver Brook, Cohas Brook and Little Cohas Brook in reaches immediately downstream of I-93 crossings prior to construction. We continue to believe that scientific assessments of aquatic life impacts from the project cannot be made without baseline information that provides a basis for comparison to the build condition and can help inform BMP mitigation design.

Air Quality

EPA notes that "NHDOT will consider requiring the inclusion of air pollution control devices in future construction contracts". [Responses to Comments from Federal Agencies, number 24, on page 8; and Response to Comments from State Agencies and State Elected Officials, number 7, on page 1.] We continue to believe that the project specifications/contract documents should incorporate specifications requiring

construction vehicles and equipment to include retrofit control equipment (oxidation catalysts or particulate filters installed on the exhaust of the diesel engine). Retrofit technology is not new and the benefits to New Hampshire of requiring them for this project will extend beyond the I-93 widening construction period as the equipment is used for subsequent projects. Both EPA New England and the New Hampshire Department of Environmental Services remain available to assist NHDOT in developing contract specifications to reduce diesel emissions. We strongly encourage NHDOT/FHWA to make a commitment to retrofits part of the Record of Decision for the project.

Greenhouse Gas Emissions

We appreciate the information provided in the FSEIS that explains how the project will work to be consistent with the recommendations of the 2009 New Hampshire Climate Action Plan. We do not however agree with the statement in the FSEIS that a quantitative analysis of greenhouse gas emissions is not warranted. We believe that federal agencies have a greater responsibility to address greenhouse gas emissions (GHG) in light of the "Endangerment and Cause or Contribute Findings for Greenhouse Gases under Section 202(a) of the Clean Air Act" ("Endangerment Finding") signed by EPA Administrator Lisa Jackson, as well as the issuance of Executive Order 13514 "Federal Leadership in Environmental, Energy, and Economic Performance" (EO 13514). Therefore we recommend that NHDOT/FHWA should clearly 1) state that carbon dioxide and the other greenhouse gases identified in EO 13514 are pollutants and 2) account for the amount of GHG emissions anticipated from the project. The Endangerment Finding determined that the current and projected concentrations of the six key well-mixed greenhouse gases--carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6)--in the atmosphere threaten the public health and welfare of current and future generations. Additionally, Section 1 of EO 13514 states that it is the "policy of the United States that Federal agencies shall measure, report, and reduce their greenhouse gas emissions from direct and indirect activities." FHWA developed an extensive website related to climate change issues (http://www.fhwa.dot.gov/hep/climate/resources.htm) demonstrating an awareness of the importance of the issue, especially given that the transportation sector accounts for around one third of U.S. GHG emissions. FHWA/NHDOT should correct this oversight by providing an inventory of GHG emissions related to the project and the expected increase in vehicle miles traveled (VMT's) prior to the close of the NEPA process.

Indirect Effects

Basis for Build Estimates

Use of sound population forecasts is important because it affects the accuracy of transportation performance and estimated environmental impacts of growth. We remain very troubled by the use of population forecasts from New Hampshire's Office of Energy and Planning (OEP) as the Build condition, as opposed to the No Build condition. The FSEIS indicates that OEP assumed when making their forecasts that no infrastructure

constraints would exist. As described in Appendix C, when asked if the projections would change if the I-93 improvements were not constructed as proposed, the State Demographer said "*...he might consider lowering his population projections.*" He went on to say that "*...this corridor presently operates in a constrained fashion.*" But nowhere in the document is there a description of how OEP addressed removal of that constraint (i.e., widening of the highway) in making their projections. For an issue that is central to the accurate projection of population levels, it is imperative that there be documentation of how OEP took the widening of I-93 into account when they made their forecasts. Otherwise the accuracy of the population and employment forecasts is suspect.

Indeed, the methodology posted on OEP's website indicates that the principal assumption underlying their forecasts is that trends of population change in a community will remain about the same in the future. Since the corridor is constrained now, if OEP carried these trends forward into the future it seems almost certain that their forecasts for the corridor represent the No Build condition, not the Build condition. If so, then the FSEIS underestimates population growth, and therefore also underestimates resulting indirect environmental impacts. Since the forecasts of employment growth are linked to those for population growth, indirect impacts of job growth are also likely to be underestimated.

Delphi Panel

Clearly EPA and NHDOT have different opinions about the merits of the Delphi panel. Based on a conversation with the I-93 project manager at the time the Delphi panel was held we understood that NHDOT supported the results of the panel and would consider using the approach on future projects. We are therefore puzzled by NHDOT's change in attitude. We disagree with a response in the FSEIS that states that gravity models are more transparent than Delphi panels. This is not the case as many of the assumptions underlying gravity models are not transparent to non-modelers, and the models themselves may be based on old data. By contrast, members of the I-93 Delphi panel were asked to describe the assumptions they used in making their forecasts, and each of them prepared a statement that described how they reached their conclusions. All of this information was published in the final report on the Delphi panel, making the rationale for their forecasts very transparent. We continue to believe that the Delphi panel produced credible projections.

Cumulative Impacts

We believe it is problematic that the proposed MADOT I-93 Tri-Town Interchange project is not explicitly considered in the EIS's cumulative impacts analysis, since it would be located on the same highway only a few miles to the south of the proposed widening project. The Tri-Town Interchange project currently is undergoing environmental review, and if built as proposed it has the potential to be a large traffic generator. It is intended to provide better access to 700 acres of land in the vicinity of the interchange, and to support/catalyze up to 3.6 million square feet of development and 12,000 new jobs. This planned growth is in addition to secondary development that may be induced by the project. It is reasonable to assume that some of the new traffic

generated by the proposed I-93 Tri-Town project will travel on sections of I-93 in New Hampshire. We continue to believe that these effects should be addressed in the cumulative impacts analysis and not dismissed as "negligible."